

Appln No. 10/089,406  
O. Colette et al.  
Office Action dated October 18, 2005

### LISTING OF CLAIMS

1. (cancelled)

2. (cancelled)

3. 3. (currently amended) Device for protecting an electrical source for powering at least one electrical component (4), wherein the device comprises a test unit (6) that delivers a signal (8) representative of a level of availability of the electrical source (2) to a control unit (10), the control unit (10) determining an operating mode of the electrical component (4) in which the consumption of electrical energy of the electrical component depends on the availability signal (8) received from the test unit (6), and an inverter (6) connected to the electrical source (2)~~Protection device according to Claim 1~~, wherein the electrical component is a motor, and the control unit (10) is interposed between the electrical source (2) and the electrical component (4), and in that the control unit (10) modifies the frequency of an electric current which supplies the electrical component (4) to limit the quantity of energy supplied to the electrical component by the electrical source (2).

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4. (previously presented) Device for protecting an electrical source capable of powering at least one electrical component (4), wherein the device comprises a test unit (6) capable of delivering a signal (8) representative of a level of availability of the electrical source (2) to a control unit (10), the control unit (10) determining an operating mode of the electrical component (4) in which the consumption of electrical energy of the electrical component depends on the availability signal (8) received from the test unit (6), wherein the control unit (10) is interposed between the electrical source (2) and the electrical component (4), and in that the control unit (10) modifies at least one characteristic of an electric current which supplies the electrical component (4) to limit the quantity of energy supplied to the electrical component by the electrical source (2), wherein the control unit (10) includes an inverter (12), applying an electric current of variable frequency to the electrical component (4), and of a control circuit (20) of the inverter (12), the control circuit comprising an assembly of resistors (28) interposed between a ground terminal (22) and a maximum voltage terminal (24) of the inverter, the assembly of resistors (28) having a plurality of connection terminals (32, 36, 50, 52) capable of being connected to an intermediate terminal (26) of the inverter (12) via a control line (62) provided with adjustment means (60), the availability signal (8) delivered by the test unit (6) being supplied to the adjustment means (60) such that the

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adjustment means connects the intermediate terminal (26) of the inverter to a connection terminal (32, 36, 50, 52) of the assembly of resistors (28) determined according to the availability signal (8).

5. (previously presented) Protection device according to claim 4, wherein the assembly of resistors (28) includes a divider bridge having a plurality of resistors (44, 46, 48) and connection terminals (32, 36, 50, 52) disposed between each of the plurality of resistors and adjacent opposite ends of the plurality of resistors, the adjustment means (60) connecting the control line (62) to one of the connection terminals (32, 36, 50, 52) according to the availability signal (8).

6. (previously presented) Protection device according to Claim 5, wherein the divider bridge comprises two resistors (44, 46) having a node (50) disposed there between, and the adjustment means (60) includes a first switch (70) having a normal operating position in which the control line (62) is connected directly or by the intermediary of a protective resistor (40) to the maximum voltage terminal (24) of the inverter (12) in order to allow a normal operating mode of the electrical component (4), and a degraded operation position in which the control line (62) is connected to the node (50) of the divider bridge in order to allow a degraded operating mode of the electrical component (4), and by a second switch (72) having a

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closed position in which the control line (62) is connected to the ground terminal (22) of the inverter (12) in order to prohibit the operation of the electrical component.

7. (currently amended) ~~Control~~ Protection device according to Claim 6, wherein the assembly of resistors (28) comprises a potentiometer (90) having end terminals (32, 50) connected to the maximum voltage terminal (24) and to the ground terminal (22) of the inverter, and a slider terminal (92) connected to the intermediate terminal (26) of the inverter by the intermediary of the first switch (70) when the first switch is in its closed position, and a manual control (94) device adjustable by an operator and capable of controlling the potentiometer (90) directly or indirectly.

8. (currently amended) ~~Control~~ Protection device according to Claim 7, wherein the two resistors (44, 46) of the divider bridge (28) are separate from the potentiometer (90).

9. (currently amended) ~~Control~~ Protection device according to Claim 7, wherein the potentiometer (90) constitutes one of the two resistors (44, 46) of the divider bridge.

10. (currently amended) ~~Control~~ Protection device according to one of Claim 7, wherein the electrical component is an electric motor (4) driving a compressor of an air-conditioning system and the manual control device (94) obtains a continuous adjustment of

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the speed of the motor between a minimum speed corresponding to a "warmest" mode and a maximum speed corresponding to a "coolest" mode.

11. (currently amended) ~~Control~~ Protection device according to Claim 8, wherein the electrical component is an electric motor (4) driving a compressor of an air-conditioning system and in that the manual control (94) obtains a continuous adjustment of the speed of the motor between a minimum speed corresponding to a "warmest" mode and a maximum speed corresponding to a "coolest" mode.

12. (currently amended) ~~Control~~ Protection device according to Claim 9, wherein the electrical component is an electric motor (4) driving a compressor of an air-conditioning system and in that the manual control (94) obtains a continuous adjustment of the speed of the motor and in that the manual control (94) is capable of obtaining a continuous adjustment of the speed of the motor between a minimum speed corresponding to a "warmest" mode and a maximum speed corresponding to a "coolest" mode.